

AMENDMENTS TO THE CLAIMS:

Claim 1 (currently amended): A furnace-type atomic absorption spectrophotometer comprising:

- a tube for heating a sample therein;
- monitoring means for monitoring temperature of said tube and outputting a monitored value indicative of the monitored temperature;
- heating control means for digitally controlling heating current for heating said tube such that said monitored value will approach a specified target temperature value; and
- parameter setting means for setting parameters according to conditions of measurement and thereby adjusting a indicial response characteristic characteristics of said heating control means in units of milliseconds when said tube is heated by said heating control means.

Claim 2 (previously presented): The spectrophotometer of claim 1 wherein said heating control means includes a calculator for digitally obtaining a quantity of a specified operation of said heating control means by a PID control calculation on difference between said monitored value and said target temperature value and said parameter setting means serves to set at least one of parameters for said PID control calculation.

Claim 3 (previously presented): The spectrophotometer of claim 1 wherein said parameter setting means includes an input device for allowing a user to input therethrough said parameters.

Claim 4 (previously presented): The spectrophotometer of claim 1 wherein said parameter setting means includes an input device for allowing a user to input therethrough a condition corresponding to said parameters.

Claim 5 (previously presented): The spectrophotometer of claim 2 wherein said parameter setting means includes an input device for allowing a user to input therethrough said parameters.

Claim 6 (previously presented): The spectrophotometer of claim 2 wherein said parameter setting means includes an input device for allowing a user to input therethrough a condition corresponding to said parameters.

Claim 7 (previously presented): The spectrophotometer of claim 2 wherein said PID control is carried out with a proportional parameter, an integration parameter and a differential parameter.

Claim 8 (original): The spectrophotometer of claim 1 wherein said monitoring means monitors values indicative of the temperature of said tube.

Claim 9 (original): The spectrophotometer of claim 1 wherein said parameter setting means includes a memory which stores sets of parameters corresponding to different measurement conditions.

Claim 10 (original): The spectrophotometer of claim 3 wherein said parameter setting means includes a memory which stores sets of parameters corresponding to different measurement conditions and said input device allows a condition to be inputted therethrough, said parameter setting means selecting one of said sets of parameters according to said condition inputted through said input device.

Claim 11 (original): The spectrophotometer of claim 2 wherein said heating control means controls said heating current by a phase control method and said quantity of a specified operation is a firing angle.

Claim 12 (currently amended): A furnace-type atomic absorption spectrophotometer comprising:

- a tube for heating a sample therein;
- monitoring means for monitoring temperature of said tube and outputting a monitored value indicative of the monitored temperature;
- heating control means for digitally controlling heating current for heating said tube such that said monitored value will approach a specified target temperature value; and
- parameter setting means for adjusting parameters according to kinds of elements to be detected, ~~said parameters determining a response characteristic~~ and thereby controlling indicial response characteristics of said heating control means in units of milliseconds when said tube is heated by said heating control means.

Claim 13 (currently amended): The spectrometer of claim 12 wherein said ~~response characteristic is an indicial response characteristic~~ indicial response characteristics include characteristics at a time of raising temperature.

Claim 14 (previously presented): The spectrometer of claim 12 wherein said heating control means includes a calculator for digitally obtaining a quantity of a specified operation of said heating control means by a PID control calculation on difference between said monitored value and said target temperature value and said parameter setting means serves to set at least one of parameters for said PID control calculation.

Claim 15 (previously presented): The spectrophotometer of claim 14 wherein said PID control is carried out with a proportional parameter, an integration parameter and a differential parameter.

Claim 16 (previously presented): The spectrophotometer of claim 12 wherein said monitoring means monitors values indicative of the temperature of said tube.

Claim 17 (currently amended): The spectrometer of claim 1 wherein said

~~response characteristic is an indicial response characteristic~~ indicial response characteristics
include characteristics at a time of raising temperature.